

# The Financial Impact of Pressure Ulcers

A review of the direct and indirect costs associated with pressure ulcers.

## Abstract

The costs associated with pressure ulcers are considerable. According to the Agency for Healthcare Research & Quality (AHRQ), pressure ulcers cost the US healthcare system an estimated \$9.1-\$11.6 billion annually<sup>1</sup>. In addition to direct treatment related costs, pressure ulcers also result in litigation, government penalties, and impact hospital performance metrics. On top of the financial implications, pressure ulcers also have a significant impact on patient morbidity, mortality, and quality of life. To further exacerbate the problem, as the population ages, the percent of patients at risk for developing pressure ulcers is growing, thus increasing the demand for early stage prevention.

### Direct Costs

Every year, billions of dollars are spent treating pressure ulcers and their associated complications. Hospital-acquired pressure ulcers are one of the most common preventable conditions, affecting over 1 million patients annually. In 2008, the Centers for Medicare & Medicaid Services discontinued reimbursement for hospital-acquired pressure ulcers (HAPUs). However, despite heightened awareness, recent studies have shown that an estimated 3.5 - 4.5% of all hospitalized patients are developing potentially preventable, hospital-acquired pressure ulcers.<sup>2</sup>

Studies have shown that the development of a pressure ulcer independently increases the length of a patient's hospital stay by 4-10 days.<sup>3,5</sup>

Hospital-acquired pressure ulcers significantly increase healthcare costs. The increased costs are primarily due to prolonged hospitalizations. Studies have shown that the development of a pressure ulcer independently increases the length of a patient's hospital stay by 4-10 days.<sup>3,5</sup> These prolonged hospital stays are also associated with an increased incidence of nosocomial infections and other complications. The cost of treating a pressure ulcer depends on its severity, with estimates generally ranging from \$2,000- \$20,000 per ulcer.<sup>6</sup> The incremental cost of treating stage 1 PUs is just over \$2,000, stage 2 PUs range between \$3,000-\$10,000, stage 3 PUs range between \$5,900-\$14,840, and stage 4 PUs cost as much as \$18,730-\$21,410.<sup>7</sup> The Society of Actuaries has calculated that the overall incremental cost of treating an average pressure ulcer is \$10,700.<sup>8</sup>

**Table 1. Incremental Costs of Treating Patients With PUs, as Reported in the Published Literature**

Source	Stage 1	Stage 2	Stage 3	Stage 4
Trueman and Whitehead (2010) <sup>2,5</sup>	\$2,159.07	\$8,932.55	\$14,839.56	\$21,410.12
Pham et al (2011) <sup>27,37</sup>	N/A	\$10,283.96	\$11,129.57	\$18,731.47
Padula et al (2011) <sup>5</sup>		\$2,909.07 <sup>a</sup>		\$5,904.13 <sup>b</sup>
Society of Actuaries (2010) <sup>19</sup>			\$10,699.52 <sup>c</sup>	
Mean costs (using all data, including costs that span stages)	\$5,255.89	\$8,206.27		\$13,785.73
Minimum costs	\$2,159.07	\$2,909.07		\$5,904.13
Maximum costs	\$10,699.52	\$10,699.52		\$21,410.12

All costs converted to 2011 US dollars.

<sup>a</sup>Stages 1-2.

<sup>b</sup>Stages 3-4.

<sup>c</sup>Stages 1-4.

In addition to prolonging hospitalizations, there are several other cost drivers in the treatment of pressure ulcers, such as: nursing time for wound care, nursing time for patient position changes, wound dressings and other advanced wound care products, specialty beds/mattresses, medications, and surgical debridement/treatment.<sup>9</sup>

### Litigation

Hospital-acquired pressure ulcers have important legal implications, as lawsuits over pressure ulcers are becoming increasingly common. According to the Agency for Healthcare Research and Quality, there are more than 17,000 pressure ulcer related lawsuits filed annually (second only to wrongful death lawsuits).<sup>1</sup> The average settlement in a pressure ulcer malpractice lawsuit is \$250,000. One study found that settlements favoring patients occurred in up to 87% of cases, with some awards as high as \$312 million.<sup>10-11</sup>

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## Penalties/Reimbursement/Performance Measures

The U.S. Centers for Medicare and Medicaid Services views a pressure ulcer as a “never event” and therefore the development of a pressure ulcer can lead to significant monetary penalties. Furthermore, in an era of value-based reimbursement, hospital performance scores are increasingly tied to reimbursement rates. In October 2014, as mandated in the Patient Protection and Affordable Care Act, the quartile of hospitals with the highest HAPU rates will be penalized a 1% pay reduction for all Medicare patients. In addition, we are entering an era where Medicare reimbursement rates are being tied to patient satisfaction scores.

## Cost to Patients

A conversation regarding the costs of pressure ulcers can't discount the impact that they have on a patient's quality of life. Beyond the financial implications, pressure ulcers are a source of significant morbidity and mortality for patients and have broad physiological and psychological effects. Each year, ~60,000 patients die as a direct result of pressure ulcers.<sup>1</sup> Patient's living with pressure ulcers suffer the burden of pain and decreased quality of life. Other indirect costs to patients include: time lost from work, forced early retirement, impact on patient's families, and other expenses associated with morbidity/mortality.

## Perspective

With just a one percentage point reduction in HAPU incidence, a hospital with 15,000 annual admissions could potentially save \$1,605,000 per year.

A small reduction in pressure ulcer incidence can have a dramatic cost savings effect. Consider a 300-bed hospital with 15,000 admissions per year, a HAPU rate of 3.5%, and an incremental treatment cost of \$10,700 per ulcer. If the hospital were able to decrease their incidence of HAPUs by only one percentage point (from 3.5% to 2.5%), they could save \$1,605,000 annually.

## Conclusion

Pressure ulcers place a substantial financial burden on hospitals. By preventing pressure ulcers, hospitals can save on treatment costs, minimize litigation/penalties, improve their performance metrics and reimbursement rates, and improve overall outcomes for their patients.

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**Corporate Headquarters**

5994 West Las Positas Boulevard, Suite 217  
Pleasanton, CA 94588  
Toll Free: 1-844-826-LEAF (5323) | [www.LeafHealthcare.com](http://www.LeafHealthcare.com)